Exhibit C2

NMS 1.0 SOFTWARE DESIGN SPECIFICATION

RF PLANNING & VERIFICATION

Revision 0.5

[redacted]

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Trapeze Networks Proprietary

Revisio n	Who	Date	Description
0.1	Sudhir	[redacted]	First draft
0.2	Sudhir	[redacted]	Added the overview of logic for rf planning and updates of wizards with screen shots
0.3	Sudhir	[redacted]	Added ActiveUsersPct factor to AP_cap calculation
0.4	Sudhir	[redacted]	Added RF Verification Section
0.5	Sudhir	[redacted]	Updated document based on 1.0 functionality

1 RF PLANNING 4
1.1 RF PLANNING 4
1.2 USE CASE SCENARIOS 4
1.2.1 *Floor Definition* 7
1.2.2 *Coverage Area definition* 10
1.2.3 *NETWork DESIGN* 10
1.2.4 *Assign Channels* 12
1.3 INFORMATION MODEL 13
1.3.1 *Floor* 13
1.3.2 *Obstacle* 13
1.3.3 *Coverage Area* 14
1.3.4 *Design Constraints* 14
2 RF NETWORK DESIGN COMPUTATION 16
2.1 PRE-REQUISITES 16
2.2 AP PLACEMENT ..... ERROR! BOOKMARK NOT DEFINED.
2.2.1 *Definitions* 17
2.2.2 *Computation of AP_CAP* 19
2.2.3 *Computation of AP_cov* 19
2.2.4 *Final Location computation of Access points* ..... *Error! Bookmark not defined.*
2.2.5 *Computation of Ideal start place for an AP* ..... *Error! Bookmark not defined.*
2.2.6 *Draw contours AROUND THE ACCESS point* 21
3 RF VERIFICATION 23
3.1 OVERVIEW 23
3.1.1 *Understanding of Requirements* 24
3.1.2 *Release Matrix* 24
3.1.3 *Issues / Dependencies* 25
3.2 USE CASE SCENARIOS 25
3.2.1 *RF Topology Verification* 25
3.2.2 *AP Visibility Verification* 26
3.2.3 *RF Coverage verification* 27
3.3 RF TOPOLOGY VERIFICATION DESIGN (RFTOPOVERIFIER) 28
3.3.1 *User Interface* 28
3.3.2 *Work FLow* 29
3.3.3 *Issues* 30
3.3.4 *Information Model* 30
3.3.5 *Class DIAGRAM* 32
3.4 AP VISIBILITY VERIFICATION DESIGN (APNEIGHBORVERIFIER) 33
3.4.1 *User Interface* 33
3.4.2 *Information Model* 35
3.4.3 *Work FLow* 36
3.4.4 *Class DIAGRAM* 37
3.5 RF COVERAGE VERIFICATION DESIGN (RFCOVERAGEVERIFIER) 38
3.5.1 *User Interface* 38
3.5.2 *Information Model* 38
3.5.3 *Work FLow* 38
3.5.4 *class diagram* 40

1 RF PLANNING

1.1 RF PLANNING

This section covers the understanding of Requirements for RF Planning Tool and details the design.

The primary goals of this feature in Jumppad are:

- Ability to create a coverage Area
- Ability to design Wireless network
- Ability to automatically assign channels to different Access points
- Ability to view/edit the generated location of the Access Point and Data Point
- Ability to define obstacles in floor with attenuation factors
- Ability to specify a channel that a foreign Access Point is using (if it is not discovered by AP)
- Ability to deploy the generated configuration and then collect data to show coverage
- Ability to visibly see the difference in deployed network vs. actual coverage information obtained from Access Point
- Ability to visibly see the desired network and the coverage obtained by a "single Access Point failure"
- Ability to show clients on topoglogy map (this will be an on-demand operation)
- Ability to show Rogue Access Points discovered by Trapeze devices and allow the user to select it and mark it as a foreign Access Point
- Ability to track the location of a particular wireless user

1.2 USE CASE SCENARIOS (OUTDATED: PLEASE REFER TO USER MANUAL)

Following diagram depicts te scenarios from a user-point of view

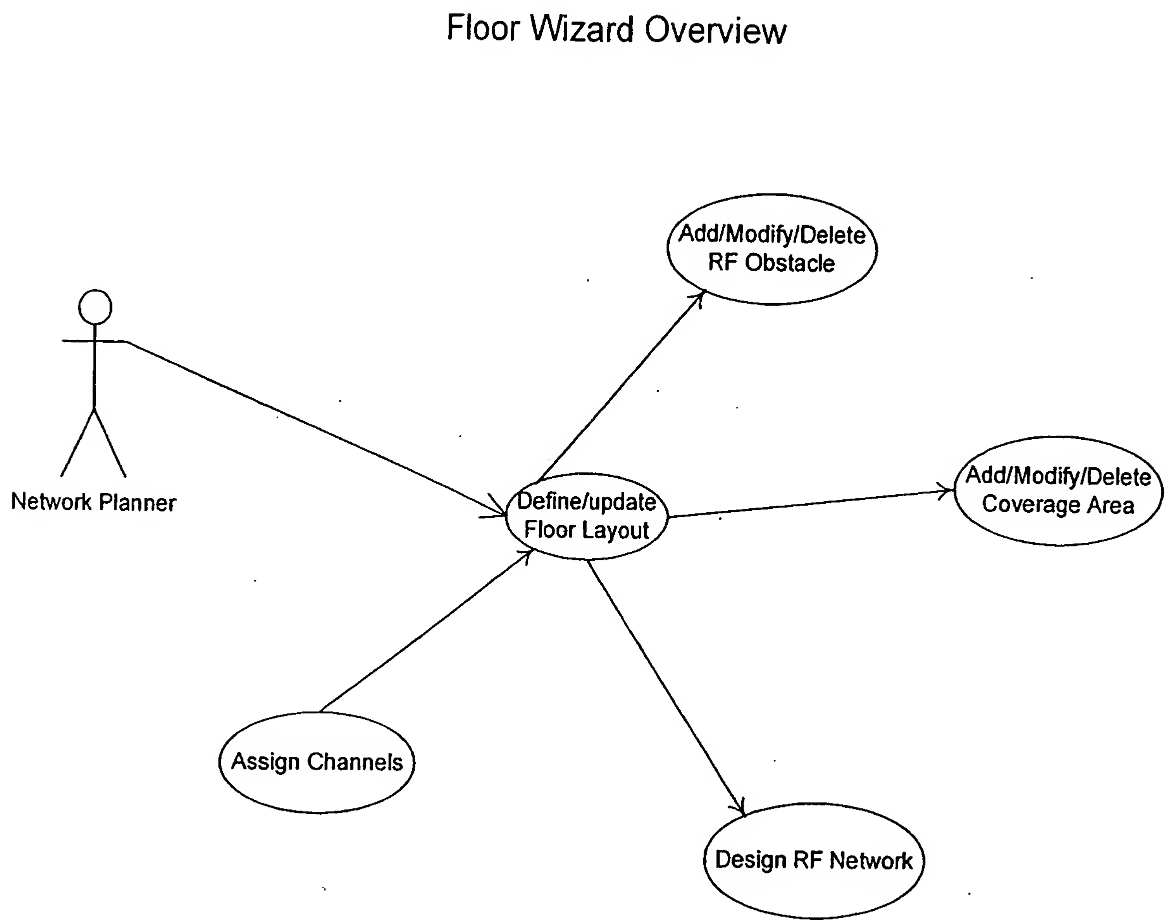


Figure 1:. Overall Scenario

The network planner would do the following:

1. Define / update a Floor
2. Define /update the propagation losses on various obstacles
3. Define a coverage area
4. Request Network to be designed. The planner may choose to specify certain constraints in order to generate the RF plan.
5. Make changes to the generated plan by moving the pre-defined locations of Access Points, redefining certain constraints or changing the profile information and Regenerate the RF Plan
6. Request for automatic channel allocation.

7. Save or deploy the changes instantaneously.

1.2.1 FLOOR DEFINITION

Launch Points:

- In Buiding Layout or with a building selected:

  Insert -> Floor

- With that Particular Floor selected

  Edit Properties

The definition of floor shall be controlled by a wizard as defined by the following scenario:

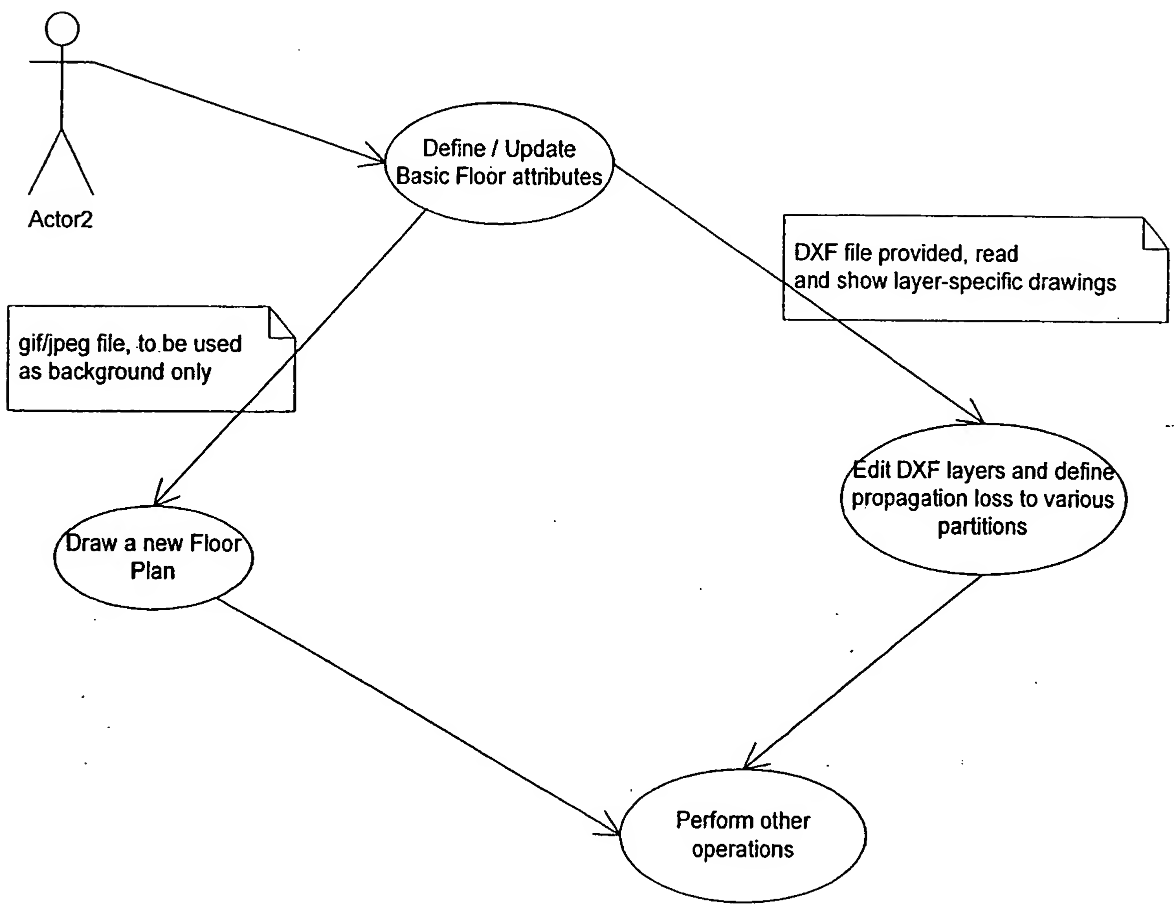


Figure 2: Floor Definition

The pages involved are as follows

Page1 : Setup

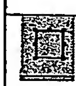
Page2: Edit Content

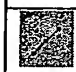
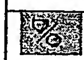
Page3: Define Coverage

Page4: Compute and Place

Page5: Reports

The tool bar shown in the picture above has the following operations:

Icon	Description
	Open/Close Layers Pane
	Zoom In
	Zoom Out
	Print
	Use a circle drawing to draw - free draw - insert an area - insert a RF Obstacle
	Use a Rectangle drawing to draw - free draw - insert an area - insert a RF Obstacle

	Use a Polyline drawing to draw - free draw - insert an area - insert a RF Obstacle
	Use a Parallelogram drawing to draw - free draw - insert an area - insert a RF Obstacle
	Use a Line drawing to draw - free draw - insert a RF Obstacle
	Insert the location of a wiring closet It will be shown as a diamond
	Group and Ungroup objects
	Create RF Obstacle after selecting a free draw Modify Any jumppad object if it is selected Delete any jumppad object if it is selected The free draw is also deleted
	Design RF Network Wizard Assign Channel Wizard
	Show the grid

1.2.2 COVERAGE AREA DEFINITION

Launch Points:

- In Floor Layout using the toolbar

  (Shape) → Insert Area

- With that Particular Area selected

  Edit Properties

1.2.3 NETWORK DESIGN

Launch Points:

Network Design can be launched only from the floor wizard

Page1: Allows the user to specify a set of constraints for the computation:

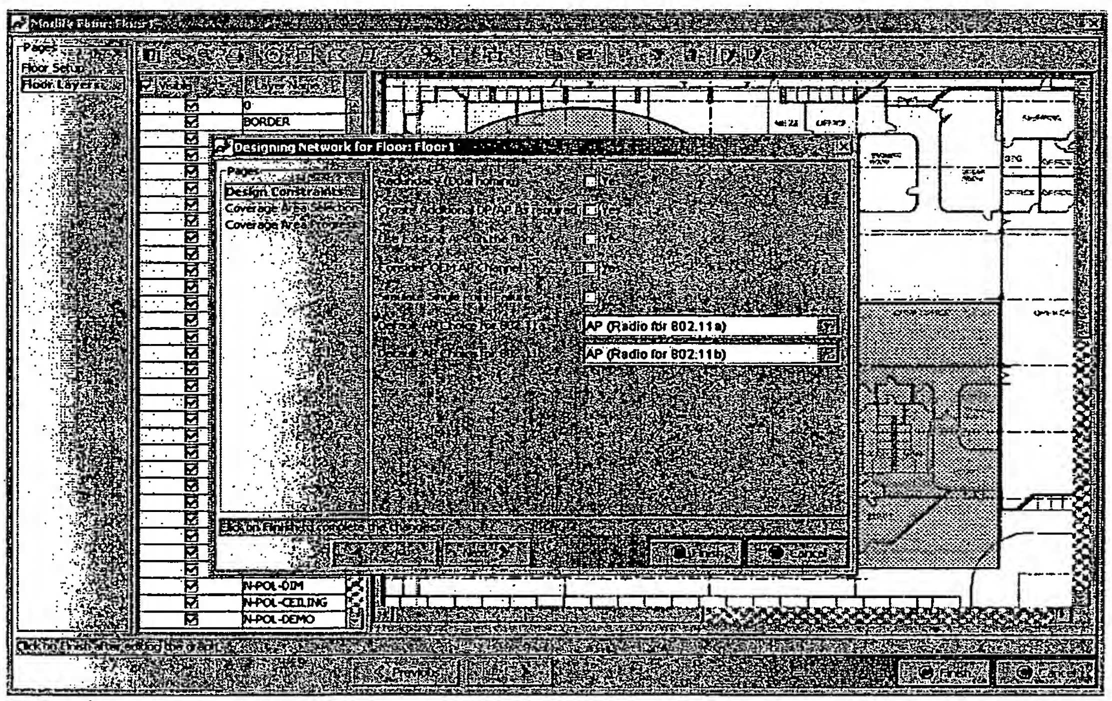
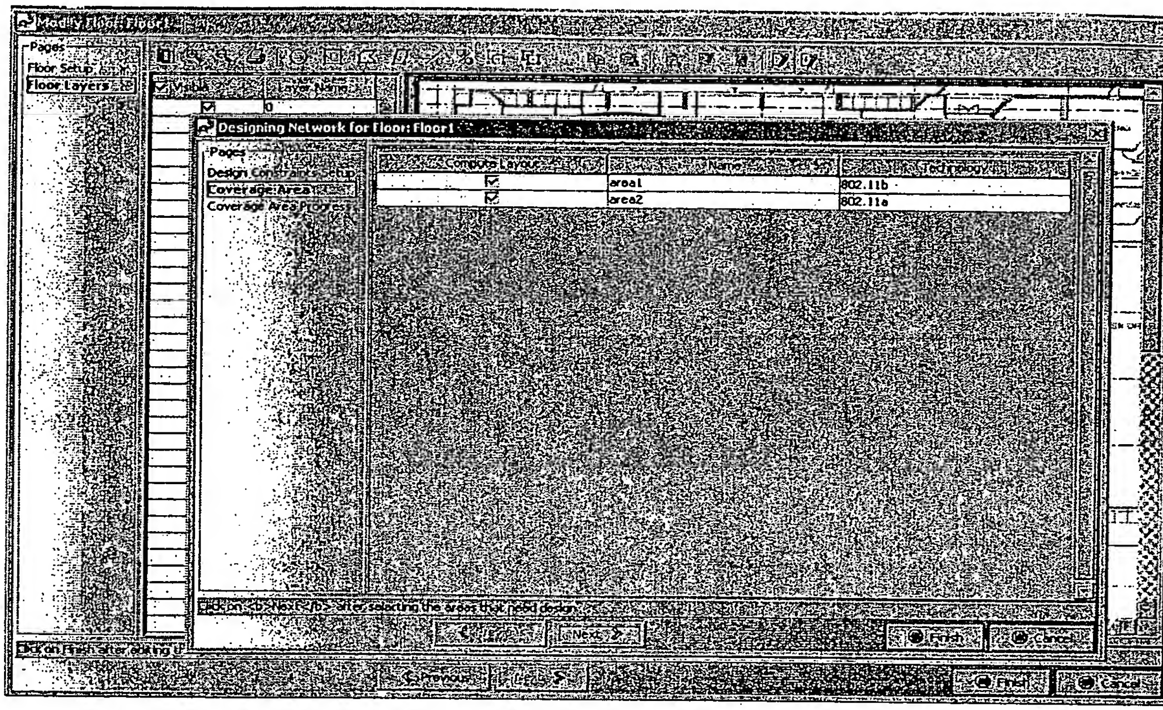
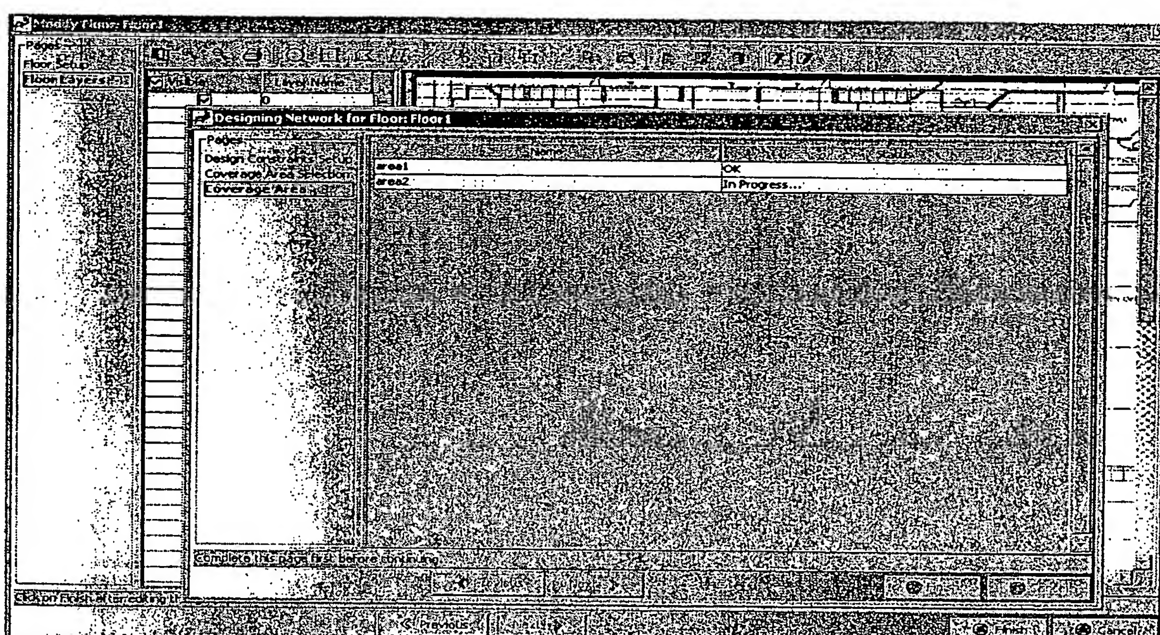


Figure 3: Request/Update RF Plan

Page2: Shows the list of coverage Areas in the floor and allows the user to select the areas that need computation



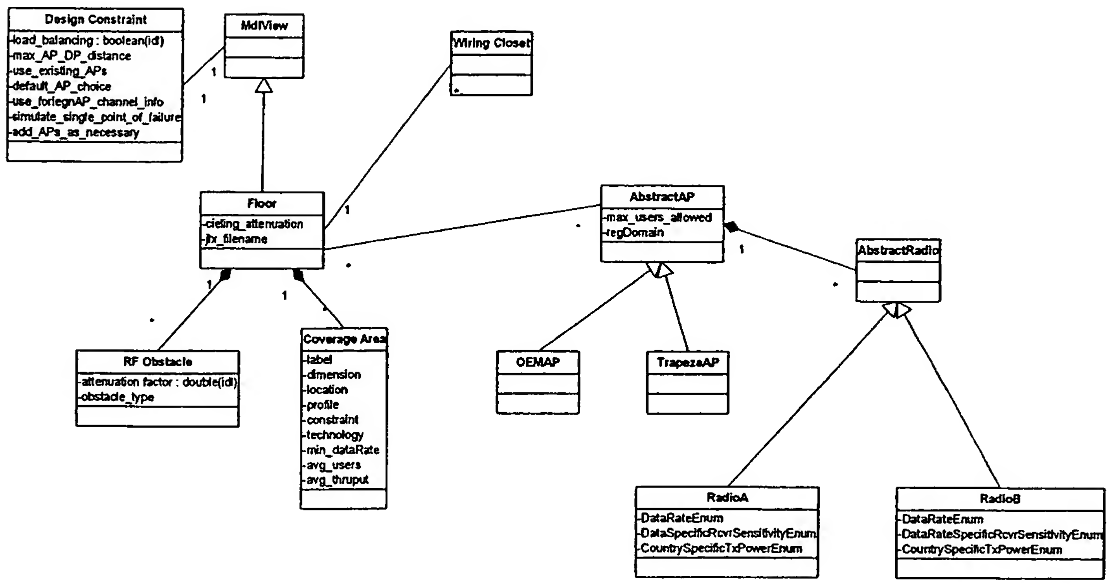
Page 3: Will show the progress of computation and upon Finish, will show all the new APs on the layout



1.2.4 ASSIGN CHANNELS

This will launch a wizard which will ask the seed AP and seed Channel number to automatically assign channel numbers to the other APs.

1.3 INFORMATION MODEL



1.3.1 FLOOR

This physical view defines the floor in the building. In addition to its floor level in the building it will allow the user to define the following additional attributes:

- Background image (gif/jpg/dxf)
- Ceiling attenuation Factor
- List of wiring closets on the floor
- List of Access Points on the floor

1.3.2 OBSTACLE

Obstacles can be of many types: External wall, Internal wall, Doors, Windows, etc.

The user can define obstacles and assign the following attributes :

- Obstacle type

- attenuation Factor
- Color

Following Rules govern the existence of a obstacle:

- A obstacle can be created/modified/deleted anytime.
- The obstacles that belong to a floor will be deleted when floor is deleted.

1.3.3 COVERAGE AREA

Coverage area is a portion of the floor where the user desires a certain WLAN connectivity. An area will have the following attributes:

- User –defined label
- User – specified area
- Technology
- Acceptable data rate
- Avg throughput
- Avg. number of users

Following rules govern the existence of an area:

- A floor can have many areas
- No two areas with the same technology requests can overlap
- An area can be created/modified/deleted anytime.
- Deletion of area will not send configuration changes to DP and/or AP.
- An area is deleted when a floor is deleted. Deletion of area does not send configuration changes to the network.

1.3.4 DESIGN CONSTRAINTS

To obtain a network from the planning tool, certain constraints can be provided by the network planner.

- Load balancing – yes/no

- Define Max. AP-DP distance
- Use Existing Access Points – yes/no
- Default Access Point choice (for 802.11a – AP with 1 radio, for 802.11b – AP with 2 radios)
- Use Foreign Access Point Channel Information – y/n
- Allow Addition of equipment – y/n
- Compute coverage for single AP failure – y/n

2 RF NETWORK DESIGN COMPUTATION

2.1 PRE-REQUISITES

Following are the pre-requisites that the user must specify before RF Network can be designed.

1. Location of atleast 1 wiring closet in the building
2. Atleast one Coverage Area defined on the floor.
3. The coverage Area that are sharing each other are completely overlapping each other.

The design would be done one coverage area or one set of shared coverage areas at a time.

2.2 AP COMPUTATION

The crux of design is to ideally place Access Points for optimal coverage based on the demands of a certain coverage Area.

Based on the white paper written by the product management, the number of APs required for a certain area will be computed in 2 ways and the maximum of the two calculations would be the number of Acdess Points that jumppad would recommend for the area. For further details

The following section covers the work-flow and the equations in detail

2.2.1 DEFINITIONS

Variable	Description
AP_cap	# of APs required based on capacity needs
AP_cov	# of APs required based on coverage needs
N_users	# of users
N_totalUsers	# of total users including the roaming factor
ROAM_FACTOR	% of users that are going to roam in and out of the area
AreaBW	Bandwidth desired for the area
R_min	Desired throughput (Tx and Rx) (Mbps)
ActiveUsersPCT	% of total users that are active at any given time
R_totalArea	Total access rate for the area
R_baseline	Acceptable access rate for technology 5.5, 11 Mbps for 802.11b 36 Mbps for 802.11a
MACEffFactor	Ineffiiciency in MAC algorithm, Range (50-60%)
ContentionFactor	Additional slowdown due to the inefficieny of multiple users contending for bandwidth in CSMA/CA
Area_cov	Geometrical area of the Coverage Area (m^2)
F	Radio frequency in GHz
R	AP cell radius in kms
n	Path Loss exponent that increases based on the obstacles on the floor (n =2 for free-space calculation)
PL_freespace	Path loss of Trapeze AP in free space (dBm)

MAX_TxPower	Country and technology specific max transmit power of trapezeAP (dBm)
MAX_Rx_Sensitivity	Data rate specific max. receiver sensitivity (dBm)
GAIN	Antenna gain in (dBi)
Att_margin	Attenuation margin allowance (-dB)

2.2.2 COMPUTATION OF AP_CAP

N_totalusers = (1+ROAM%) * N_users [Eq 1]

AreaBW = N_totalUsers * R_min * ActiveUsersPCT [Eq 2]

R_totalArea = AreaBW / (MACEffFactor * ContenctionFactor) [Eq 3]

AP_cap = round (R_totalArea/R_baseline) [Eq 4]

2.2.3 COMPUTATION OF AP_COV

Algorithm 1:

Recursively, find the number of APs that cover the entire coverage Area by starting at the center Point of the coverage Area and dividing the polygon, if the ap at the center point does not cover the entire area.

Step:

1. Given, the shape of the polygon, confirm that it is a convex shape.
2. If it is concave shape, it needs to be split into minimal convex shapes for this algorithm to work (FUTURE)
3. Compute the maximum CELL radius (R) based on path loss exponent 2. This will give the maximum distance from the AP that the radio waves can be received.

   The cell radius can be calculated based on the following equation

   PL_freespace = 40.225 + 20log(f/2.45) + 20log(R)

   PL_freespace = MAX_TxPower + GAIN + (MAX_Rx_Sensitivity) + (Att_margin)
4. Draw contour at the center point of the polygon. Note, this center point is computed by getting the centroid of the polygon and not by doing LxComponent.getCenter()
5. Adjust the free space contours w.r.t obstacle databsae
6. For 11a, check if the cell coverage is 85% sufficient. For 11b, check if the cell coverage is 90% sufficient.
7. If it is sufficient, record this center point as one of points for placing AP and return.
8. If is not sufficient, divide the polygon and continue with step 4.

NOTE: do the same thing for both coverage areas, if they are shared.

2.3 AP PLACEMENT

1. Select the **Max (AP_cap, AP_cov)** as the number of APs to be placed.

2. If the area is shared, then select the technology that needs most no. of APs as the area where APs need to be placed first.

   FirstArea = Area where Max (AP_a, AP_b),

   Second Area = Area where Min (AP_a, AP_b)

   where AP_a is Max(AP_cap_a, AP_cov_a) and AP_b is Max (AP_cap_b, AP_cov_b)

3. If AP_cov >=AP_cap, use the points recorded while computing AP_cov as the points where APs need to be placed.

4. IF AP_cap > AP_cov, then compute a set of points recursively by starting at the center of the polygon and dividing the polygon.

5. If the Area is not covered, use the next Tx power and go to Step 4

6. User can move the APs or adjust the power to visually get the area covered.

7. The user can lock the locations of the access points

2.4 FIRST GUESS POWER

To Compute the first guess power for APs after the APs are placed, we do the following

1. for every vertex of the polygon, find the closest AP and raise its power (steps of 2) to see if the vertex is reachable

2. For every AP, find a closest AP to its location and raise the power of each other to cover half the distance between them

2.5 OPTIMAL POWER COMPUTATION

To compute optimal power for a set of APs covering an area, we do the following:

1. Compute the first guess power and see if it is sufficient to cover the entire coverage area.

2. If it is not sufficient, find the best MAX power that will cover the entire area, when this power is used on all APs. The range of MAX power is from (highest of First Guess Power) to (max allowed for that tech and country)

3. Once, a best max power is found, for each AP, find the best power between (its firstguess power) and this max power, that will not reduce the area coverage percentage.

To find out if a set of power is sufficient or not, we do the following

1. Using the power, compute the contours and adjust them based on obstacle database.
2. Find the Union of all the contours.
3. Compute the area of the union. If it is 95% or more, this power set is assumed to be half good
4. Compute the number of points that were not actually covered when computing the union. This gives us a rating of how many points were missed out because of complex geometrical union. If this set of points is less than 10% of the entire points in coverage area, the power set is assumed half good.
5. If the power set is good in both 4 and 5, we take that power set to be good.

2.6 DRAW CONTOUR AROUND THE ACCESS POINT

Based on the location of AP and the cell radius, we need to draw a controur that takes into account the attenuation factors of obstacles around the AP

1. Compute the cell radius, based on power of AP. If AP is not specified, compute it using the PL_freespace.
2. Draw a circle using AP location as the center point.
3. Split the circle into a polygon with points sampled at every 5 degrees (72 points)
4. For every ray that joins center point and one of 72 points, find the farthest point based on obstacle database
5. Join the adusted points to complete the polygon that depicts the contour.

2.6.1 FARTHEST POINT COMPUTATION

Given a ray, we need to compute the farthest point for a given path loss. The goal is how far should one march from one point to the other to reach the given path loss with obstacles taken into consideration.

1. For a given ray, firnd a list of obstacles that intersect it. Note its intersection points.
2. Sort this list of obstacles and intersection points based on its distance from point1 of the ray.
3. At each intersecting point, compute the PL = PL_freespace + ∑attenuation of obstacles that intersect till that point.

4. If the computed path loss is more than the passed in path loss, then use that intersection point as the farthest point. And return

5. If all intersction points were processed and the path loss is still less than that passed in, then find the farthest point where the path loss is matched. This can be done in a binary sort between the last tried point to the farthest point of the ray.

2.7 CHANNEL ASSIGNMENT

The algorithm used for channel assignment is as follows:

1. channel is assigned for all radios on the floor. All Non-trapeze APs are also considered as radios for which channels have already been assigned.

2. All radios are sorted by distance from (0,0)

3. For every radio, pick an unused channel number that can be assigned.

4. If all channel numbers are used, find out which channel number is the farthest from the radio. Use radios for which channel assignment has already been done. And use that channel number. To find the farthest channel number, sort the radios that have been assigned channels by distance from the radio in question.

3 RF VERIFICATION

3.1 OVERVIEW

RF Interference is a big problem in WLAN. The presence of RF obstacles within a floor can and will be seen on the actual coverage of devices that transmit radio signals. There is one side, where one can project based on some theoretical models that a coverage would look a cetain way. This coverage computation is based on a lot of user inputs. The better job a user does in defining obstacles that can attenuate the radio signals, the more accurate the empirical models can be. However, in most of the cases, call it lack of interest in defining such an amount of information, or anything else, the information that is fed into the theoretical model is insufficient to depict the actual environment.

Interference is not the only problem in WLAN deployment. Mis-connections and mis-configurations can also exist. Problems like, "A user might have planned to connect ap1 to port 2 , but actually it got connected to port 3" can be common.

Jumppad tries to tackle these problems and provide solutions that may aid the user to better manage their WLAN deployments.

RF Verification is a process that requires interactions between user and the application. It involves various categories –

1. Verify whether all APs are connected to the correct DPs as planned/configured.
    a. This requires not much manual intervention other than starting the verify process
2. Verify whether a certain AP can see other APs based on propagation model chosen in Jumppad.
    a. This also requires not much manual intervention other than starting the verify process.
3. Verify whether the coverage contours drawn by Jumppad is close enough to reality.
    a. This requires a lot of manual interaction, especially in defining the measurement points and providing signal strength data of all APs seen at that measurement point. The elements involved in this are
        i. Lite application on a portable device (laptop or preferably PDA)
        ii. An API to the wireless NIC to obtain required measurement readings. (this will be required to completely automate the process from the time a point is clicked on a certain floor map using the lite application)
        iii. Necessity of moving around the coverage area/ floor to collect such data. (there are many ideas of automating this step, but this is a non-goal)

3.1.1 UNDERSTANDING OF REQUIREMENTS

This section covers the understanding of Requirements for RF Verification Tool and details the design.

- Ability to verify RF-wired topology
- Ability for the user to move around with the tool on a portable device to gather information
- Ability to Select a RF Measurement Point and request for projected signal strengths
- Ability to export an existing Floor plan from jumppad
- Ability to read in a floor plan to define RF Measurement points and RF measurements.
- Ability to import RF Measurement readings into Jumppad
- Ability to correct the attenuation factors of the RF Obstacles based on data collected at the measurement points

Following sections do define the user scenarios for solving all the above problems, but listed here is the phased approach of what feature will be available in which release of jumppad

3.1.2 RELEASE MATRIX

Feature	Jumppad Release	Comments
Verify RF-wired topology	1.0	This involves 2 items: - DP-AP wired connections verification - AP visibility verification
Allow user to obtain projected signal strength readings at a given measurement point	1.0	The user can then verify this information, by going to that location and actually measuring the radio signals
Allow the user to provide the actual readings of the signal strength at a given point in Jumppad	1.0	The user will have to go to the location of measurement point, measure data, and come back to jumppad to type in the data to correct coverage contours
Provide a lite Application to allow the user to move around with the floor plan to define data and new measurement points	FUTURE	

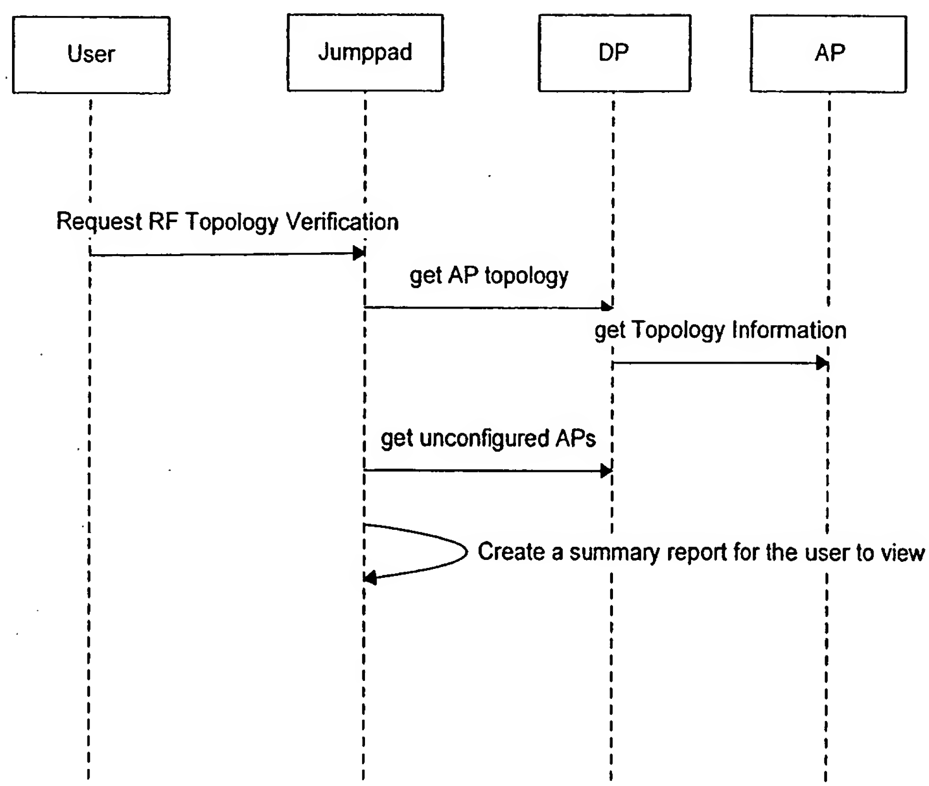
3.1.3 ISSUES / DEPENDENCIES

This feature has the following issues or depends on the following features:

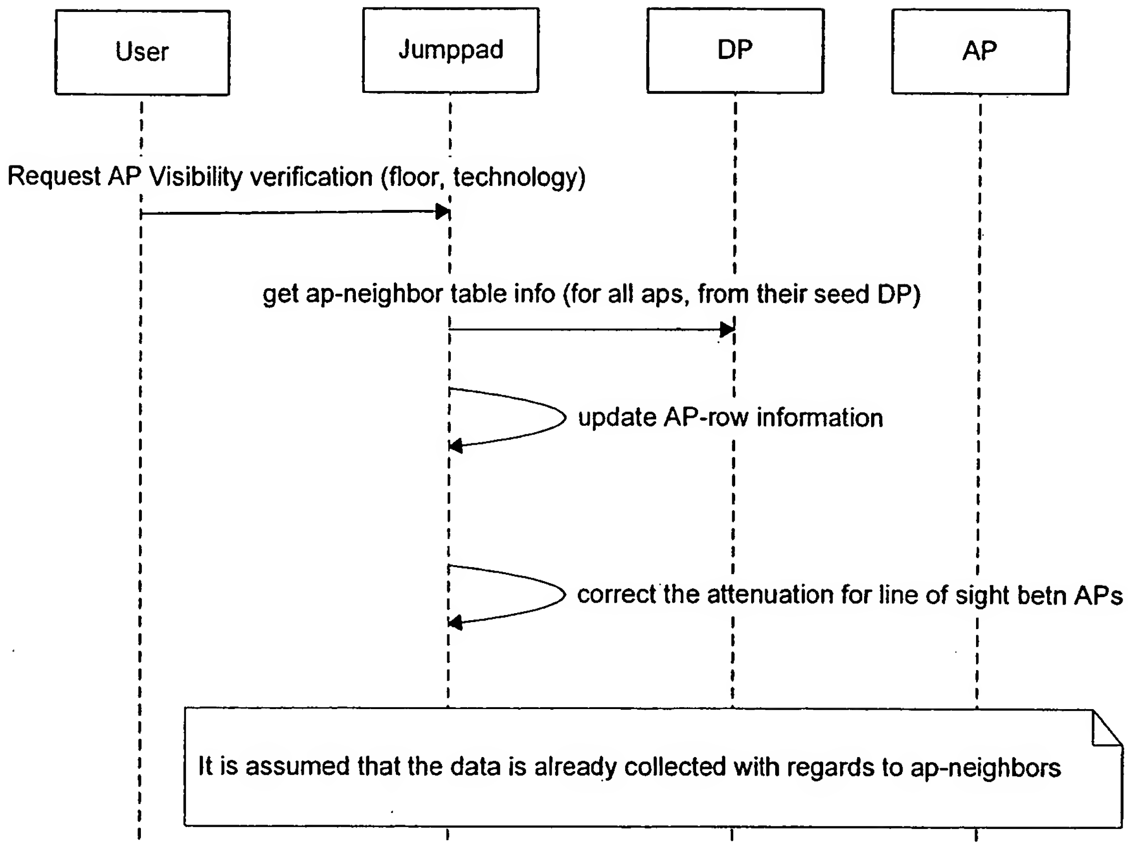
- Jumppad support of Dual-homed AP
- AP DTD definition
- Rogue AP Detection support in DP

3.2 USE CASE SCENARIOS

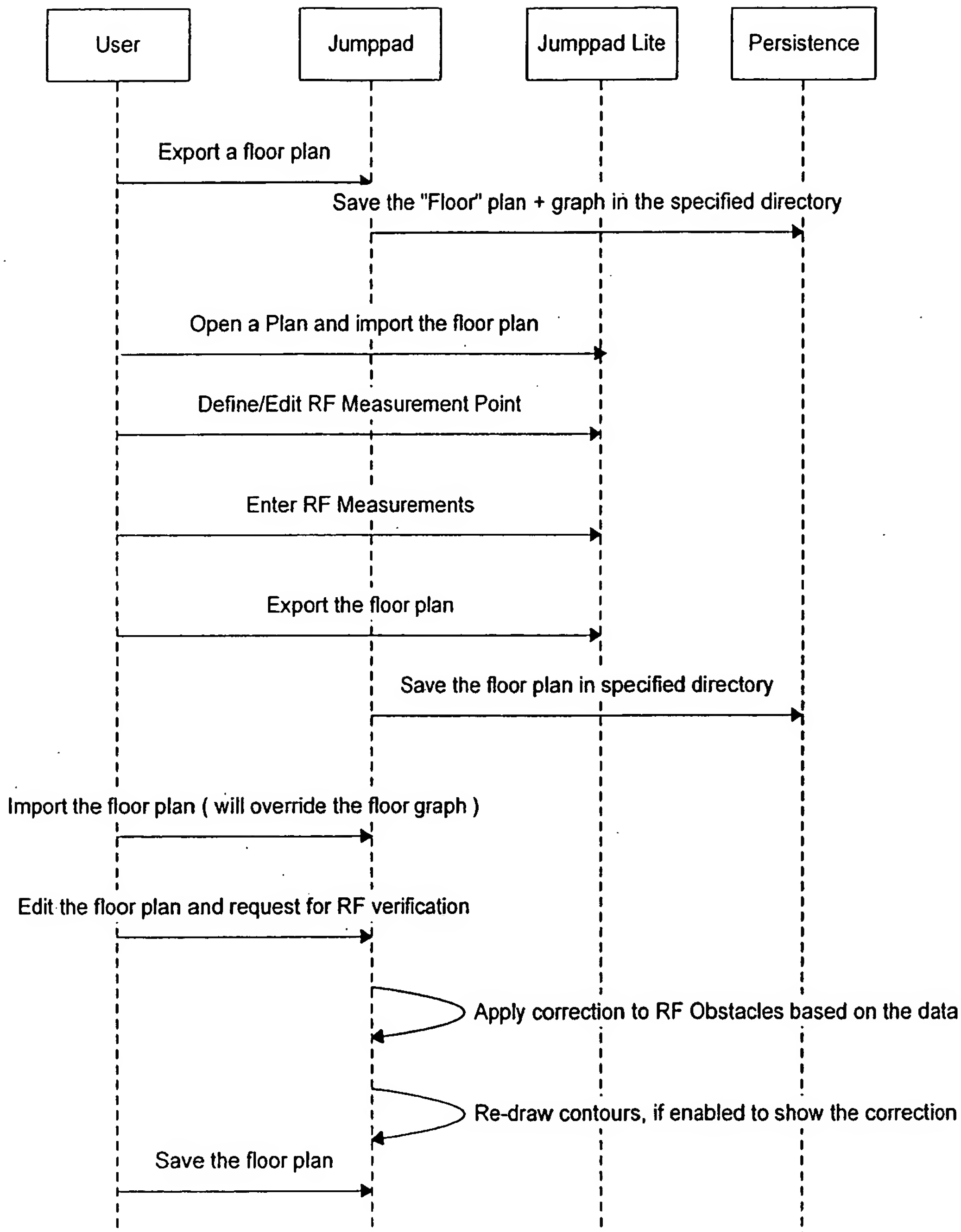
3.2.1 RF TOPOLOGY VERIFICATION



3.2.2 AP VISIBILITY VERIFICATION



3.2.3 RF COVERAGE VERIFICATION



3.3 RF TOPOLOGY VERIFICATION DESIGN (RFTOPOVERIFIER)

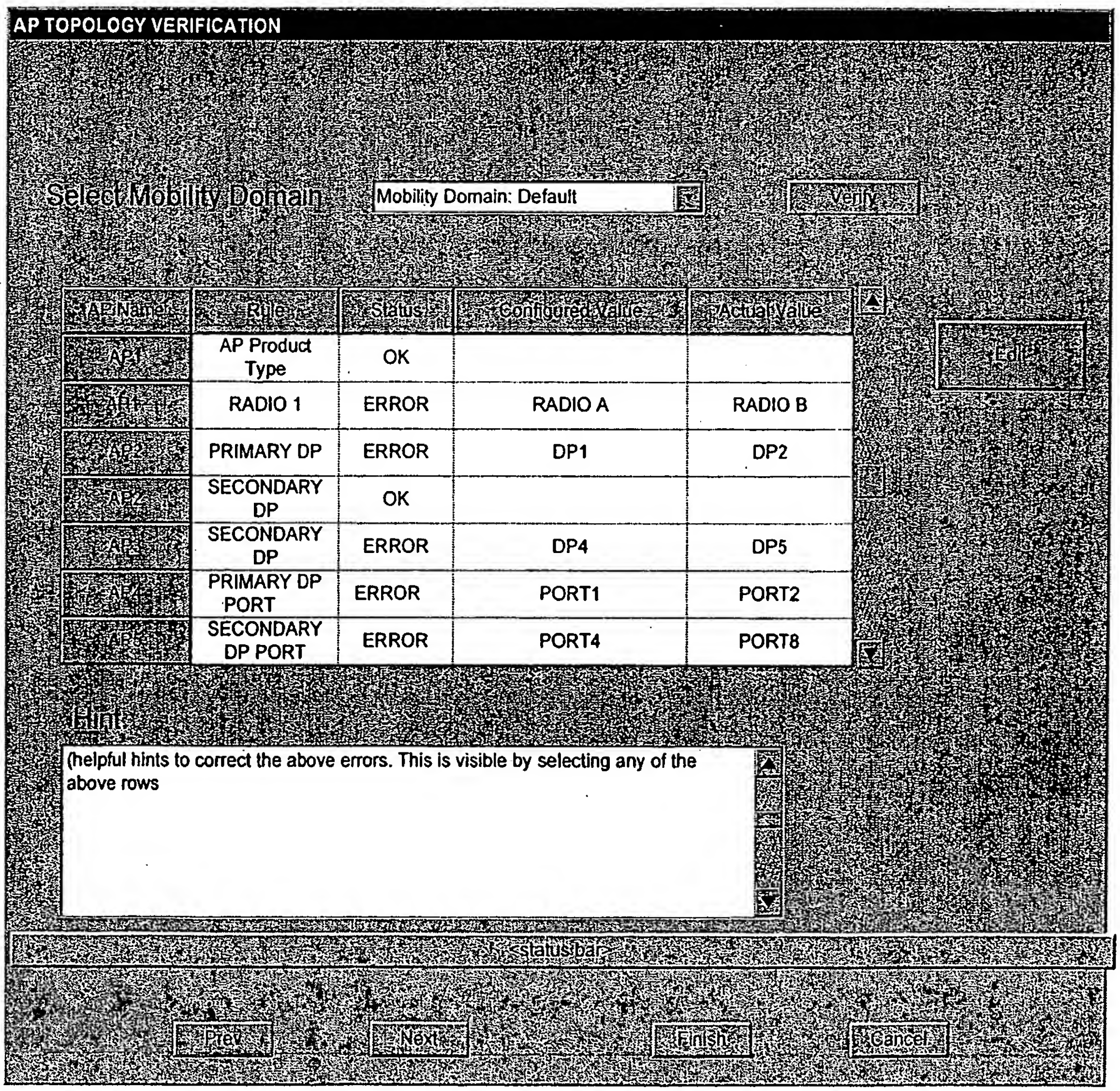
3.3.1 USER INTERFACE

The intent here is to show the differences between what the DPs are configured for a given AP and what AP sees from the DP.

3.3.1.1 Launch Points

Changes → Verify AP Topology

3.3.1.2 APTopoVerifierWizard



The wizard will have only one page as shown above. Following UI rules will apply on the page:

1. Verification can be done only per mobility domain
2. Once Verify is clicked, all other buttons are disabled and status bar will indicate that information is being obtained.
3. Jumppad will construct one big request per device with individual request per Port to get topology status on the port. It is expected DP to return a config-like status object with data filled as last reported by AP.
4. Jumppad will receive the information, try to make sense out of it and show the information in a table.
5. Edit button will be enabled only if one of the rows is selected. When a row is selected, some helpful hint will be provided to indicate what might have happened and how to fix it. Using Edit button, user can edit the Access Point (note, this wil be a dual-homed object) to fix the error. Editing the object does not mean that the error is fixed from the network. A next deploy will supposedly fix the error.
6. Finish / Cancel will be enabled once Verification is complete.
7. A Cancel would discard all edits that were performed on the access point to fix it.
8. There will be some errors on access points that do not exist in jumppad at all. In such case, Edit will be disabled for such errors. This is possible in the case when the AP was not configured in jumppad, but was auto-discovered by DP and the configuration is out-of-sync. (Q: Will DP be auto-discovering APs? Or will it be verifying the configuration?)

3.3.2 WORK FLOW

Following are the steps that jumppad will take to verify the RF wired topology:

1. Request the AP topology information from DeviceInterface
2. DeviceManager will send out requests to each of the DPs that are currently being managed by jumppad
3. DeviceManager will also send out request to obtain list of all unconfigured APs that are requesting the boot image.
4. The RFTopoVerifier will collect a list of errors on APs that have one of the following errors:

   a. **AP product type misconfiguration**

      i. AP is configured to be one type, but it is actually of another type (Note: this is in the case when user has created AP in jumppad)

   b. **Radio Slot misconfiguration**

      i. AP is configured to the right type, but the slot1 contains Radio B instead of RadioA

c. **Primary DP misconfiguration**

   i. AP is configured to be connected to DP1 as primary (with higher BIAS), but it is actually connected to DP2

   ii. AP is configured to the right DP, but the bias value received from the AP for that DP is not the same.

   iii. AP is configured for the right DP, but the cluster member IP address of the DP is different.

d. **Secondary DP misconfiguration**

   i. AP is configured to be connected to DP1 as secondary (with lower BIAS), but it is actually connected to DP2

   ii. AP is configured to the right DP, but the bias value received from the AP for that DP is not the same.

   iii. AP is configured to right DP, but the cluster member IP address of the DP is dfferent.

e. **Primary DP Port misconnection**

   i. AP is configured to right AP, but it is connected on the wrong port

f. **Secondary DP Port misconnection**

   i. AP is configured to right AP, but it is connected on the wrong port

g. **Unconfigured AP in DP**

   i. AP does not exist in jumppad and this DP is getting boot image requests

   ii. AP exists in jumppad and is connected to DP2, but DP1 is getting is boot requests **(Q.. will this be caught by e?)**

3.3.3 ISSUES

6. Since any request to a device will fail if the generation count has a mismatch, it emphasizes that all devices are In-sync in jumppad.

7. It is not desirable to use the syslog for this information as it can take a lot of time in processing the information.

3.3.4 INFORMATION MODEL

Required Information From DP:

1. AP Topology information Status

   a. Topology information as created using the announce packet information of AP or the complete topological information from the AP. The information required is:

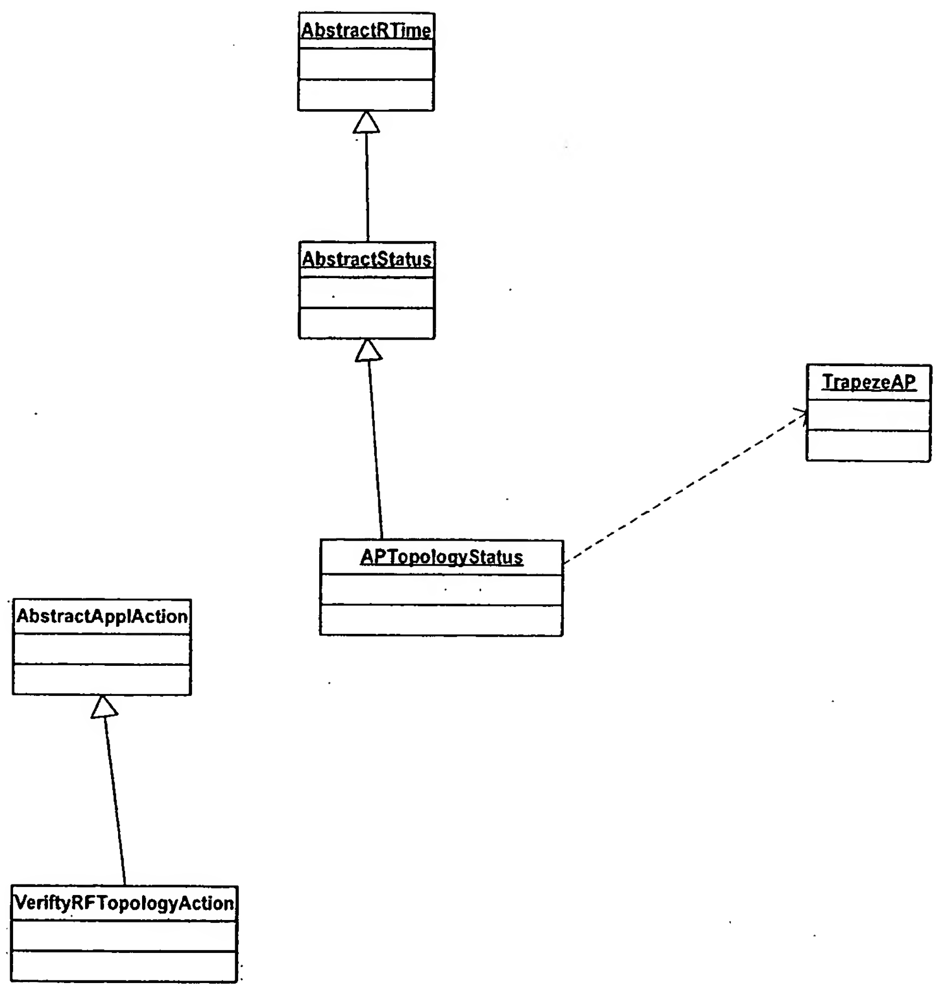
DP	IP address	DP Port Number Connected To	DP Bias Value as seen by AP	DP status as seen by AP
Primary DP	Cluster mbr ip	1..20	H/L	Up / Down
Secondary DP	Cluster mbr ip	1..20	H/L	Up / Down

Q: if AP can already say which one is Primary, is the bias information not already available that way? Ie. Does AP not make a DP primary based on bias value?

3.3.4.1 APTopologyStatus

- Internally generated key and transient object
- Not linked to any object in model (similar to AbstractStats Object)
- Has a key information of the associated object (in this case TrapezeAP)
- Contains the topological information that is being received from AP.

3.3.5 CLASS DIAGRAM



3.4 AP VISIBILITY VERIFICATION DESIGN (APNEIGHBORVERIFIER)

3.4.1 USER INTERFACE

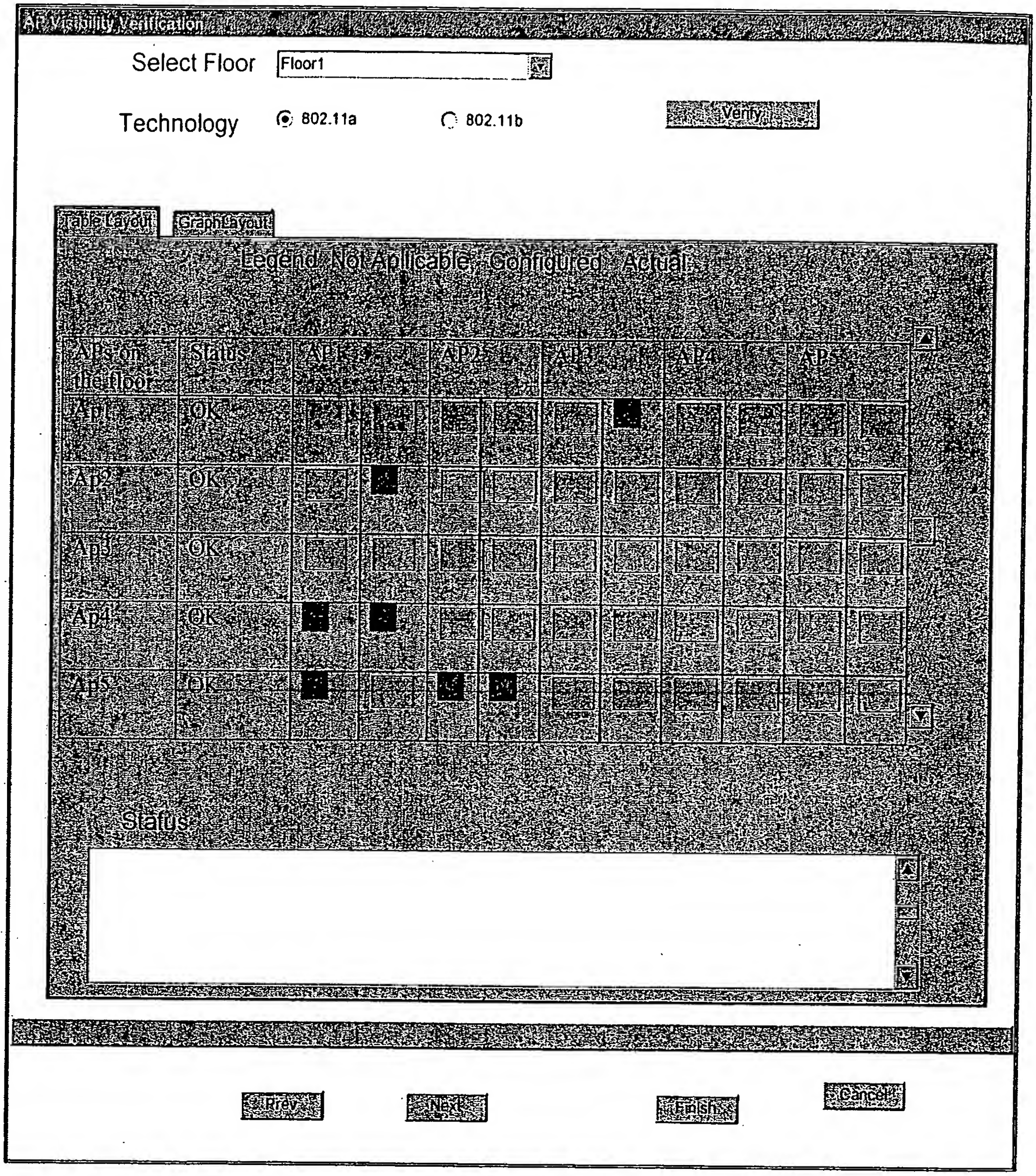
The intent here is to show what an AP sees over the air. The information will have two views, one tabular, similar to a dashboard, the other viewing the errors on the graph of the selected floor.

The scope of the information that will be retrieved and shown will depend on a selection of a Floor and the right technology.

3.4.1.1 Launch Points

Changes → Verify AP Visibility

3.4.1.2 APVisibilityVerifierWizard



1. AP visibility verification can be done only on a per floor and technology basis

2. Once Verify is clicked, Jumppad will send the request to one AP at a time to get the neighbors information. (Note, we can control this by another user option to send it to all APs at once or one at a time to avoid loss of wireless client connections)

3. The status column can have one of the following messages:

   a. Scheduled

   b. Collecting Data

   c. OK

   d. Communication Failure

4. Once each AP sends back information, while other AP is being requested for the same information, Jumppad will populate the above shown grid as to who is available with what signal strength. (We can use the tool tip to show the signal strength, if showing a number on the signal does not look good)

5. The legend will be as follows:

   a. Configured Value (Green)

   b. Actual Value (Red)

   c. Not applicable (Grey)

6. Status / List box will indicate any rogue APs that were discovered. This will however not give the user option to create the rogue AP. It is a non-goal of this feature. It is possible that the neighbor list also reports managed APs that are in a different floor.

7. In the graph Layout, the user will be able to graphically see where the errors are located. Using the BSSID information and the signal strengths received from its perceived neighbors, jumppad will attempt to approximate the location of the AP.**(TBD)**

3.4.2 INFORMATION MODEL

3.4.2.1 Required Information from DP

A table of neighbors that a particular AP sees with the following information about each neighbor:

- BSSID

- channel number

- technology

- Signal Strength

- Signal to Noise Ratio

3.4.2.2 APNeighborsStatus

- internally generated key

- Models the table sent from DP with regards to AP neighbors

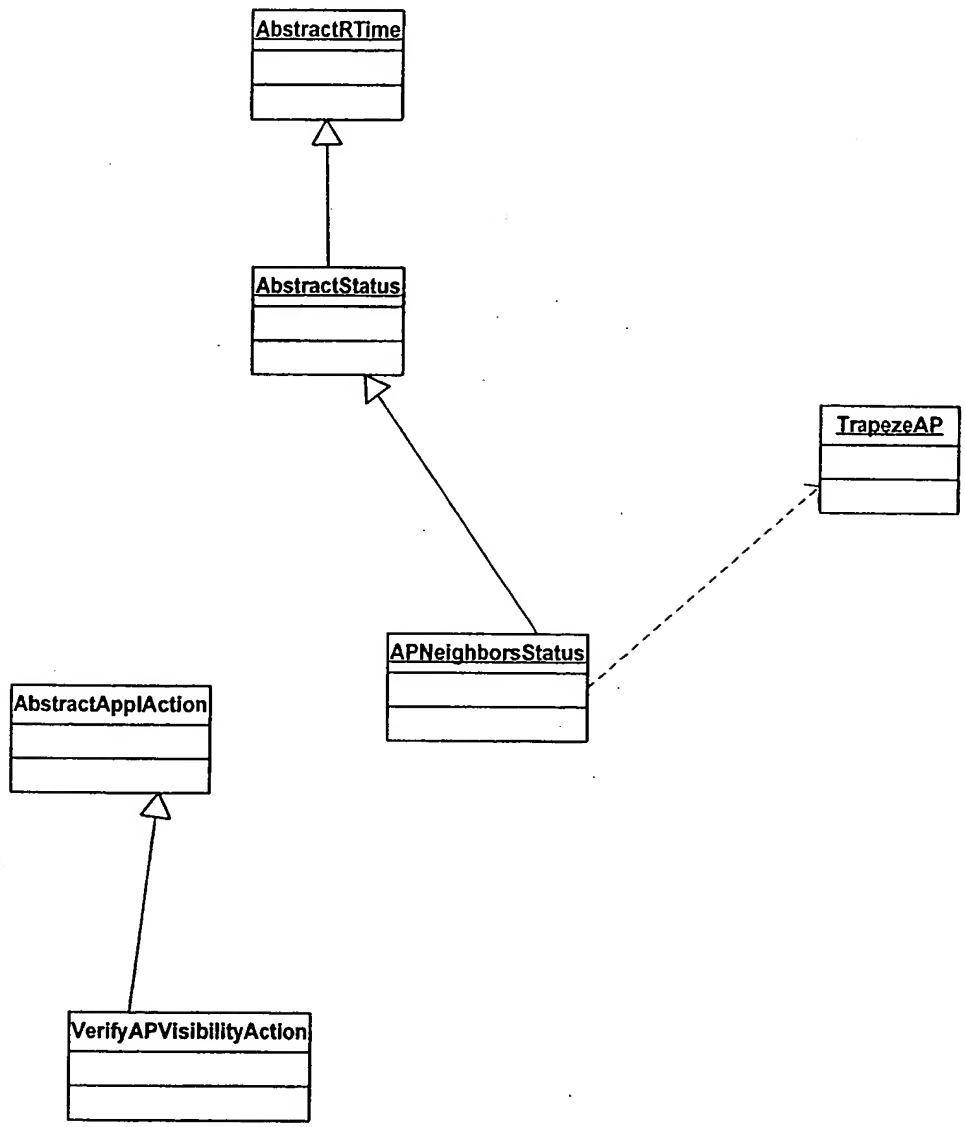
- has a ObjectKey of the associated AP

3.4.3 WORK FLOW

Following are the steps that jumppad will take to verify the RF wired topology:

1. User requests to verify AP visibility
2. Jumppad requests neighbor AP information from each of the AP
3. Jumppad creates a report to show the difference between the projected visibility and actual visibility [Note: it will be difficult to show the contours as it is just one reading between the two APs]
4. Do we do the attenuation correction here in order to correct our projected contours to be non overlapping, if a set of AP neighbors are actually unreachable?

3.4.4 CLASS DIAGRAM



3.5 RF COVERAGE VERIFICATION DESIGN (RFCOVERAGEVERIFIER)

3.5.1 USER INTERFACE

Launch Points:

From within Floor Wizard

Wizard:

RFMeasurementWizard

Pages:

- MeasurementPointsSelectPage (to select the points that u need to apply on the AP coverage)
- MeasurementEntryPage

Note: do we want to show the user the obstacles whose attenuation factors were corrected?

3.5.2 INFORMATION MODEL

3.5.3 WORK FLOW

3.5.3.1 User needs to move around with the floor plan

1. the user will export the floor plan from jumppad.
2. jumppad will export the "Floor" information in XML similar to device mode with all non-deployable information.
3. Jumppad will export the jlx file to the specified directory.
4. Jumppad has now created the files required to move around with the floor plan

3.5.3.2 User runs Jumppad-Lite and loads the floor plan

1. User launches jumppad-lite and opens a new plan
2. User imports the "Floor" into the plan. Both files must exist in the specified directory.
3. User can now launch the floor wizard by editing the floor plan
4. User can create new RF measurement points or edit existing measurement points

3.5.3.3 User Wishes to enter RF measurements being received by the portable computer

1. User edits the floor wizard, if a measurement point is to be created.
2. User selects a RF measurement point and launches RFMeasurementWizard to enter the data.
3. User will enter the following based on the information: This information is for the best signal being received. This measurement must be entered for the AP that the user is connected to.)
   a. Technology (802.11a or 802.11b)
   b. BSSID of the AP (Note: If we need to allow the user to select the AP that they are reading signal from, then we need to export AP information as well , and that would mean the entire plan. And by entering BSSID, it means that this verification is being done after deployment so that jumppad has the BSSID information.)
   c. Signal strength
   d. Frequency of the received signal
   e. Note: Do we want the user to enter all possible values of the values received from the best signal that will define the AP proximity.
4. User then moves to the next measurement point and follows the same procedure.
5. User can create more measurement points, if needed.

Note: Must we recommend the user enters the points where they have roamed from AP to other. Does it tell us something? Do we want to infer something from here?

3.5.3.4 User is done entering RF measurements and now wants to verify coverage

1. User will export the "Floor" from Jumppad-lite. It will create two files, "Floor" information in XML and the JLX file.
2. User will import this "Floor" information onto existing floor in Jumppad. Jumppad will read in the edited jlx file and also apply changes to "Floor" object. (we now have all the measurements
3. User then launches RfCoverageWizard to verify the RF coverage.
4. User selects the RF measurement points that need be applied to correction of RF coverage (default would be all selected) Only those RF measurement points that have been recently read or have a unapplied correction to attenuation factor, will be shown here.
5. Jumppad will compute the correction factors on obstacles based on the signal readings. If there is no obstacle defined and there exists a correction factor, it will create a new obstacle close to

the measurement point and assign that correction factor. Once, the correction factor is applied, the information on the RF measurement point will be nullified.

6. Jumppad uses the information obtained from RF neighbors to correct the line of sight from two given APs.

7. User may accept all corrections/changes to view the corrected contours for a given area

3.5.4 CLASS DIAGRAM

Coming soon....